

# Titre of Anti-A & Anti-B in "O" Blood Group

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**Abstract:** *The importance of a blood group system in clinical blood transfusion practice lies in the Frequency of It's antibodies in the Possibility that such antibodies will destroy Incompatible cell's Invivo. Blood group destroy "O" is the commonest and most Prescribed blood group in our environment. From the Preset study total 10 "O" blood group subjects taken antibody titration is useful for the Identification of anti A and anti B in "O" blood group Finally this study concluded, The variation in tiler of anti-A & anti-B (in. "O" blood group) depends upon the age, sex, nutrition, life style environmental factors Phenotypic and genotypic variation.*

**Keywords:** Blood group, antibodies, Clinical blood transfusion, Incompatible cells, "O" blood group

## 1. Introduction

The importance of a blood group system in clinical blood transfusion practice lies in the frequency of its antibodies and in the possibility that such antibodies will destroy incompatible cells in vivo .Almost everybody over the age of 6 months has clinically significant anti A and anti B in their serum if they lack the corresponding antigens on their red cells. Blood group "O" red cells can be given to A, B or AB recipients and where formerly in appropriately called "Universal donor red cells". Early studies showed high frequency of potentially lytic anti A and lytic anti B in blood group "O" persons. This high frequency of alpha and beta hemolysis has been suggested to be responsible for the high frequency of ABO-hemolytic disease. Blood group "O" is the commonest and most prescribed blood group type in our environment.

Antibody titration is helpful for the identification of high titer in blood. The titer level is the reciprocal of the greatest dilution in which agglutination is observed .A score may also be assigned based on the strength of reactivity each reaction is given a value, and the score is determined by adding up the individual values .After the initial titer, the specimen should be frozen. When new specimens are submitted for titer The initial titer specimen should be tested in parallel to control variability among technologists and the relative strength of the target antigen of cells being used. Comparison study is necessary. Changes occur in two or more tubes considered as significant. Titer level studies are useful in monitoring the obstetric patient who has an IgG antibody that may cause HDN. An increase in antibody titer level during pregnancy suggest that the fetus is antigen positive and therefore at risk of developing "HDN" an increasing titer level may indicate the need for intrauterine exchange transfusion.

## 2. Methods

Preparation of 10% red blood cell suspension

- 1 ml of blood taken in the tube.
- Added saline in it until there is 1cm left from the tube mouth.
- Then centrifuged at 2500-3000 rpm for about 1-2 minutes.
- The centrifuged the supernatant was removed and blood mixed well with another saline. Then steps 2-3 are repeated.

- Added 1 drop of blood with 9 drop of saline to a tube and mixed well.

## 3. Procedure

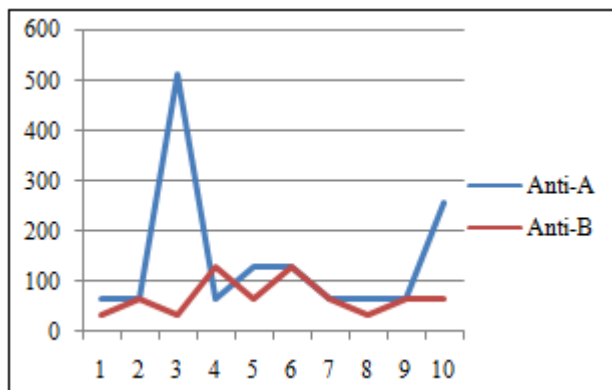
- Label a row of tubes according to the serum dilution usually 1:1 through 1:512
- Deliver 1 volume(0.1ml) of saline in to all tubes except first.
- Add 1 volume (0.1 ml)serum to tubes 1 and 2 (dilution 1:1 and 1:2)
- With clean pipette mix the content of tube 2(1:2 dilution)several times, then transfer 1 volume (0.1 ml) of mixture to tube 3(1:4 dilution)
- Continue same technique through all dilutions. Remove 0.1 ml from the final tube and discard or save for use in future dilution if required
- Add 1 volume (0.1 ml) of 2-5%saline suspension of appropriate red cell to each tubes
- Mix well and incubate for 1 hour at room temperature for IgM antibody.
- Gently dislodge button. Examine test result microscopically and grade and record the reaction.

## 4. Result

The present study carried out totally 10 samples of normal O- blood were subjected for hematological analysis.

**Table 1:** Shows titre of Anti A & Anti B in 10 individuals

Number of Persons	Anti - A	Anti - B
1	64	32
2	64	64
3	512	32
4	64	128
5	128	64
6	128	128
7	64	64
8	64	32
9	64	64
10	256	64



## 5. Conclusion

A total of 10 subjects were taken for this study. The study shows that there is a variation in titer of anti- A & anti- B in 'O' blood group individuals. In some 'O' blood group individuals, there is high titer of anti A & anti B. Finally I conclude my studies that 'O' blood group is a universal donor, but some 'O' blood group individual shows high titer of anti A & anti B (included in dangerous 'O' group). The variation in titer of anti-A & anti-B is depends upon the age, sex, nutrition, life style, environmental factors, phenotypic and genotypic variation.

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